

Catalogue no. 75-005-M — No. 2013001  
ISBN 978-1-100-22501-2  
ISSN 2292-3780

## Technical Paper

### Labour Statistics

# Siksika Nation Pilot Labour Force Survey: Collection Experience and Results 2010 to 2011



December, 2013



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- |                |  |
|----------------|--|
| ..             | not available for any reference period   |
| ...            | not available for a specific reference period  |
| ...            | not applicable   |
| 0              | true zero or a value rounded to zero   |
| 0 <sup>s</sup> | value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded |
| P              | preliminary  |
| r              | revised  |
| X              | suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>                                   |
| E              | use with caution   |
| F              | too unreliable to be published   |
| *              | significantly different from reference category ( $p < 0.05$ )   |

# Siksika Nation Pilot Labour Force Survey: Collection Experience and Results

2010 to 2011

## I. Background

Siksika Nation is a member of the Blackfoot Confederacy and a signatory to Treaty 7 in Alberta. The community, located 100 km south of Calgary, sits on 178,000 acres. According to the 2006 Census, Siksika Nation is home to 2,767 people and 851 households.

Siksika Nation developed a *Business and Operations Plan* in December 2007. The goal of this plan was to "enhance self-sufficiency and improve the quality of life of Nation members".<sup>1</sup> One of the primary initiatives was to develop and implement the Siksika Nation Human Resource Development Strategy. Understanding the demographic and labour force trends within Siksika Nation was a key first step to implementing the strategy.

Working with consultant Dr. William Wong, the Siksika Nation Chief and Council approached Statistics Canada, Human Resources and Skills Development Canada (HRSDC) and the Government of Alberta Employment and Immigration to propose a partnership to produce reliable and timely estimates of labour market information in order to support the implementation of their Human Resource Development Strategy.

Statistics Canada's Labour Force Survey (LFS) was recommended as the best option to produce key employment indicators for this community. The LFS is a household survey carried out monthly by Statistics Canada. Its primary objective is to provide descriptive and explanatory data on three groups within the working-age population: employed, unemployed and not in the labour force. These groups can be analyzed by a range of socio-demographic variables, including age, sex and education level.

Collection of the LFS data in Siksika Nation was scheduled over a two-year-period; January 2010 to December 2011. Integrating the pilot survey into the existing processing and dissemination infrastructure of the LFS was done with the objective of minimizing costs, while at the same time ensuring timely data. The existing questionnaire of the LFS was also used, with no modification. Historically, the LFS has not sampled households on any reserve in Canada, so this pilot provides an opportunity to inform Statistics Canada's data collection processes for on-reserve surveys. However, since 2003, the LFS has asked people living off reserves in Alberta to self-identify as a North American Indian, Métis or Inuit. Several analytical reports on the employment picture of Aboriginal people living off-reserve have been produced from these data.<sup>2</sup>

This report consists of two main sections. The first describes Statistics Canada's experience collecting the LFS in Siksika Nation. It discusses the collection activities, including response rates, staffing and listing activities, collection costs as well as some of the challenges that were faced in collection.

The second section provides an employment picture for Siksika Nation. Results, which include participation, employment and unemployment rates, are presented for the working-age population. Subsequent analysis focuses on more specific demographic groups within the population, as well as explores the impact of education on the key labour market rates. The results from Siksika Nation are compared to First Nations people living off-reserve in Alberta as well as to the non-Aboriginal population in Alberta.

<sup>1</sup> "A Proposal to Develop Siksika Nation Human Resource Development Strategy" by Dr. William Wong. August 8, 2008.

<sup>2</sup> Statistics Canada publication no. 71-588-X; three reports covering data from 2007, 2008-2009 and 2008-2010.

## 2. Sample Design

The sample design for the Siksika Nation Pilot LFS was the same as that used by the LFS in the Yukon, Northwest Territories and Nunavut. It is based on a rotating panel, but at different intervals than those for the provincial LFS, where respondents are interviewed monthly for six consecutive months.

As with the North design, people in the Siksika Nation Pilot LFS were interviewed eight times – once every three months over a two-year period – between January 2010 and December 2011. For example, if a household was first selected for the month of January 2010, household members were interviewed again every three months (April, July, and October 2010, January, April, July and October 2011). Each quarter, one-eighth of the sampled households were experiencing their first interview.

The sample drawn from Siksika Nation consisted of 80 dwellings each month. The residents of these 80 dwellings in the LFS sample provided the basis to generate estimates that reflected the labour market experience of all working-age residents living in Siksika Nation. Given the relatively smaller size of the area being covered, in order to get a representative sample of the target population, the samples for three consecutive months are added together. For this reason, estimates for the Siksika Nation Pilot LFS are available as 3-month moving averages.

## 3. Listing

Siksika Nation is composed of 14 enumeration areas (EA). The initial sample that was selected for Siksika Nation was based on a list of dwellings provided by the Siksika Nation band office. In order to ensure that the sample drawn provided an accurate representation of the Siksika Nation population living in the community, a second, independent listing activity was completed by Statistics Canada. For the most part, the number of dwellings in each EA matched. In all, there was a difference of 43 dwellings between the two lists.

The largest difference between the lists was found in EA 511, which includes a resort with a golf course. The band list did not include dwellings on the resort, while the independent listing activity done by Statistics

Canada did. After discussion (and some collection), it was ultimately determined that the golf course resort should be removed from the sample since the dwellings on the resort were not principal residences and that persons living in these dwellings had characteristics that were clearly different than other residents living in Siksika Nation.

## 4. Collection Experience<sup>3</sup>

Statistics Canada has maintained a relationship with Siksika Nation since 2005, through the Aboriginal Statistical Training Program and the Aboriginal Data Initiative. Since that time, Statistics Canada staff have given a number of courses on statistical analysis, as well as on how to extract information from administrative data, and on the survey process from start to finish. Also, two local initiatives were launched as result of the LFS capacity-building training: a health and wellness strategy focus group and the Siksika Language Survey. In the context of the pilot LFS, the Aboriginal Liaison Program advisor for Alberta played the role of focal point for communications for Statistics Canada and Siksika Nation throughout the survey process.

In terms of promoting the Labour Force Survey in Siksika Nation, a communication strategy was developed in conjunction with the Siksika Nation Chief and Council. This strategy included placing ads in the local newspaper, AITSINIKI, at the start of the collection exercise and again at mid-collection. A brochure was also distributed to Siksika Nation residents. This brochure was beneficial as it outlined the purpose of the survey, the type of data being collected, provided assurance of confidentiality and explained the benefits of having relevant and timely labour market information about their community.

All interviews for the Siksika Nation Pilot LFS – the initial, or birth interview, as well as the subsequent follow-up interviews – were conducted using the computer-assisted personal interview (CAPI) method. In comparison, for the provincial LFS, about seven out of ten interviews in Western Canada, on average, are conducted using computer-assisted telephone interviews (CATI). In the territorial LFS, the first interview is generally done in person (CAPI) and most subsequent interviews are done by telephone (CATI).

<sup>3</sup> Information on the collection experience was obtained from Statistics Canada's Collection Planning Management Division (CPMD) and the Edmonton regional office, which were responsible for collection in Siksika Nation.



## Siksika Nation Pilot Labour Force Survey

Given the support of the Pilot LFS by Siksika Nation Chief and Council, as well as the mandatory nature of the LFS, response rates in Siksika Nation were fairly comparable with response rates for the provincial LFS for most months of the pilot survey. The monthly response rates for the pilot survey are included in the table below:

**Table 1 Response rates for the Pilot Labour Force Survey in Siksika Nation**

Month	2010	2011
	response rate (%)	
January	91.8	82.4
February	84.8	89.5
March	91.8	94.1
April	95.9	93.0
May	87.9	84.9
June	91.3	92.4
July	93.3	83.8
August	87.3	86.5
September	90.0	91.4
October	90.7	92.0
November	97.2	89.2
December	94.2	87.8

Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2010 and 2011.

While response rates for the Pilot LFS were very good over the two-year period (90% on average compared to 88% for the province of Alberta), interviewers, as well as Statistics Canada's regional office indicated that collection in Siksika Nation proved more challenging than originally anticipated. As a result, interviewers required more time for collection in order to obtain the targeted response rates, thus impacting collection costs. On average, collection costs per interview in Siksika Nation were approximately three times higher than those in the Calgary region. However, these costs were comparable to collection costs in off-reserve remote areas in Northern Alberta.

The next two sections outline some of the challenges faced in collecting the LFS in Siksika Nation.

### 4.1 Staffing

As agreed upon with Siksika Nation Chief and Council, the intended staffing plan was to have at least three on-reserve interviewers for the pilot, using existing Statistics Canada interviewers only when Siksika Nation interviewer-positions could not be staffed. In order to recruit potential interviewers, Statistics Canada placed ads in many locations on- and off-reserve, including the

Band office, the community meeting place and wherever there were billboards (grocery store, mail office, etc.). More ads were placed in the surrounding communities when it became necessary to search for staff outside the reserve. Recruitment ads were also posted on the internet site "jobs.ca". In addition, interviewers advertised recruiting efforts through word of mouth.

Despite these efforts, there was limited success in recruiting individuals who lived in Siksika Nation. While the Band office and the Chief were very supportive of Statistics Canada's recruitment efforts, challenges arose when very few people applied and retention was difficult. Over the course of the two-year pilot, six on-reserve interviewers were hired, but none remained by the end of that period.

Staffing was an ongoing challenge during the Siksika Nation Pilot LFS. In the end, modifications to the original staffing plans had to be made and Statistics Canada interviewers from outside the community were sent to Siksika Nation to conduct interviews. This change represented unplanned increases in overall collection costs.

### 4.2 Interviewing

In general, interviewing in Siksika Nation took more time than originally anticipated. For example, approximately 10-15 cases were completed in Siksika Nation during each LFS collection period. In comparison, approximately 40 to 60 cases per collection period are completed off-reserve. As a result, collection costs were higher than originally budgeted. Some of the challenges that were faced with interviewing over the two-year period were associated with transit on reserve, respondent mobility and proxy interviewing.

#### *Transit on Reserve*

The distance between dwellings in Siksika Nation, weather and road conditions all presented challenges for collecting the 80 cases selected each month within the allotted monthly time frame. For example, transit from the east side to the west side of the community on paved roads took approximately 40 minutes, slightly longer on gravel roads, and even more so in winter months. In the winter, interviewers rented SUVs for better road stability; however, in a few instances, some dwellings were unreachable. Washed-out roads were also an issue for collection in March 2010, resulting in difficulty in reaching some respondents.

An unforeseen challenge for interviewers living outside the community was that in order to work in Siksika Nation, Statistics Canada needed to obtain work permits, which identified the employee as well as the vehicle being driven and its license plate. Costs for these permits were \$150.00 for one employee for three months; the permit had to be picked up prior to LFS week and had to be kept on the interviewer at all times. If the interviewer used a different vehicle (which often happened due to the use of rental cars) then they would have to go to the office to revise their information. If a new interviewer was brought on board, a new work permit was needed (i.e., work permits were non-transferable).

## Difficulty reaching respondents due to respondent mobility

Another challenge that interviewers reported was a difficulty in finding respondents at home. Interviewers from the community and outside the community alike indicated that it was difficult to predict when respondents might be home, making it challenging to reach all of the areas requiring collection in one day. Attempts to make appointments with respondents were often unsuccessful, which meant multiple attempts to contact respondents.

Other unforeseen obstacles facing collection arose when there was a funeral, death or cultural event taking place during the reference week. Since most interviewers lived outside the community, they lacked knowledge of the traditions or cultural events that may have been taking place during collection. This often made it more difficult, or in some cases impossible, to reach respondents of some of the selected dwellings.

Due to high mobility among residents of Siksika Nation, it was at times difficult for interviewers to find occupants of selected dwellings. Collection field reports also indicated that some residents of Siksika Nation live on reserve during the summer months, but work off reserve (often in Calgary) during other months of the year. This made it difficult for interviewers to find respondents from the selected dwellings, even though they had previously indicated that their Siksika Nation residence was their primary residence. There was also a widespread reluctance to speak for others as explained below.

## Proxy Response

Proxy response – whereby another individual in the household responds on behalf of a respondent – also proved to be difficult in some instances, with parents unable or unwilling to provide information about their adult children or other

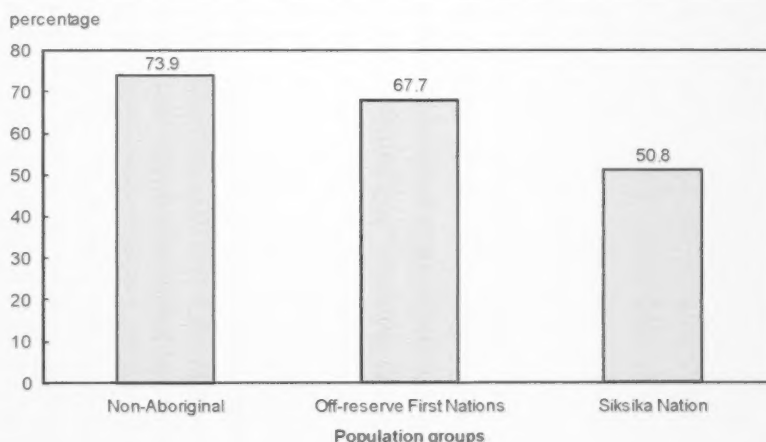
adult relatives in the home. Some respondents were reluctant to respond if the survey was conducted by an interviewer who was a member of the community. On the other hand, other respondents were reluctant to provide responses to interviewers who were not members of the community. This reluctance to speak for others was more often the experience of the interviewers living outside the community.

## 5. Labour Market Results, 2011

This section contains results from the Siksika pilot LFS, based on an average of data collected throughout 2011. While data were also collected throughout 2010, many results were similar to those in 2011. The 2010 data are available upon request.

Data are presented for the Siksika Nation population aged 15 and over, as well as for various age groups, by sex and educational attainment.

**Chart 1 Alberta participation rate, 2011 annual average, population aged 15 and over**



Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

### 5.1 Working-age population, 15 years of age and over

The participation rate gives a general sense of the degree of involvement of a population in the labour market. It is the proportion of the population that is actively engaged in the labour market, either through employment or because they are looking for work. Generally speaking, this rate can be impacted by many factors, such as the situation of the local labour market, the age structure of the population (how many retirees, how many students, how many parents with young children, etc.) and the decisions made about whether to work or look for work outside the home.

In 2011, the participation rate for Siksika Nation was lower, at 50.8%, than it was for First Nations people living off reserve and non-Aboriginal people in Alberta, whose participation rates were 67.7% and 73.9%, respectively (Chart 1).

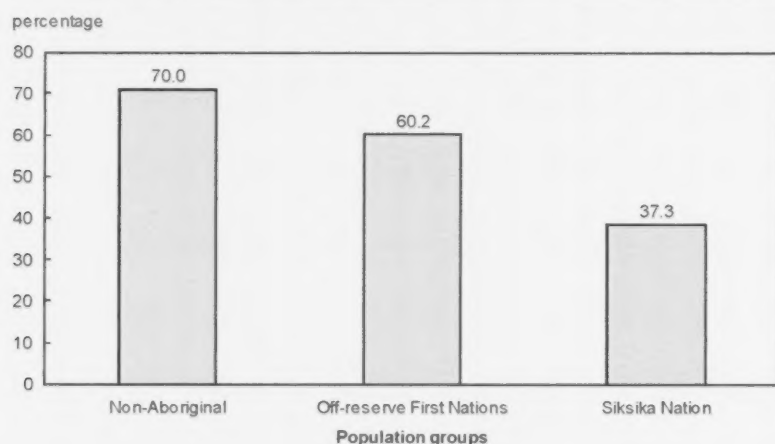
The rate of employment is the proportion of the population that is employed. In 2011, the employment rate in Siksika Nation was 37.3%. This compares to 60.2% for First Nations people living off reserve in Alberta and 70.0% for non-Aboriginal people in Alberta (Chart 2).

The unemployment rate<sup>4</sup> for Siksika Nation, at 26.6%, was higher than the rate of unemployment

for First Nations people living off reserve in Alberta (11.1%). The unemployment rate for non-Aboriginal Albertans was much lower, at 5.3% in 2011. These gaps could be associated with differences in educational attainment (see below) as well as the employment opportunities in the labour markets in the community (Chart 3).

Unemployment rates reflect the proportion of the labour force looking for work during the survey reference week. They do not always tell the whole story of unemployment; because they do not pick up the discouraged workers who have stopped looking for work altogether, despite wanting to obtain employment. It is important to look at the unemployment rate in conjunction with the other key labour market rates.

**Chart 2 Alberta employment rate, 2011 annual average, population aged 15 and over**



Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

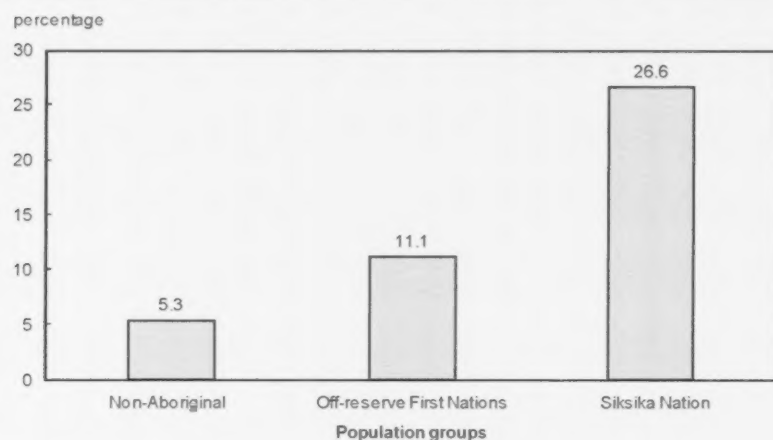
### 5.2 Core-aged Workers

The population aged 25 to 54 is referred to as the 'core-age group'. People in this age group are the most likely to be participating in the labour market because they have generally completed school and are below the age at which many people decide to retire. This age group tends to have the highest participation in the labour market as well as the highest proportion of employment.

For Siksika Nation, the employment rate of core-aged men (52.1%) was lower than the employment rates for First Nations men living off reserve (76.5%) and non-Aboriginal men (89.8%) in the same age group in Alberta.

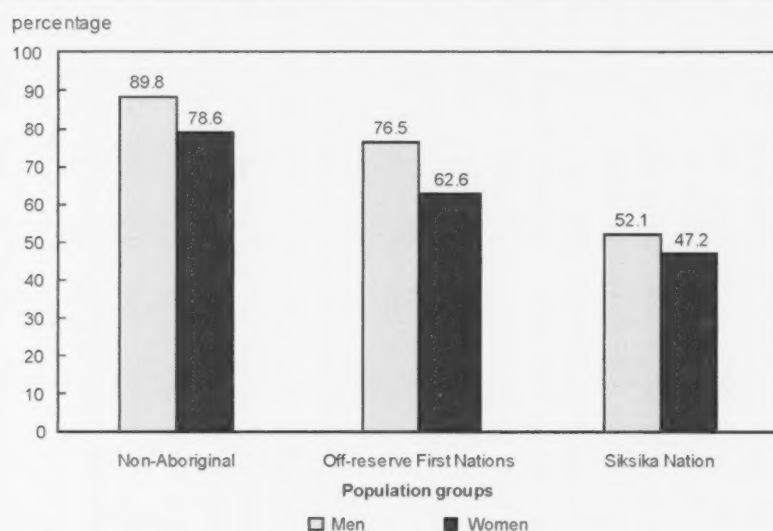
<sup>4</sup> Note that unemployment rates often have higher variability than both the participation and employment rates due to the fact that there are fewer unemployed people in the sample. When breaking the population down into sub-groups (such as by sex and age), even more variability is introduced since the sample size that represents that group becomes smaller. In many cases, unemployment rates for Siksika Nation must be used with caution or have been suppressed altogether. This type of variability and suppression is common with estimates produced for any smaller populations or sub-groups within the LFS.

**Chart 3 Alberta unemployment rate, 2011 annual average, population aged 15 and over**



Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

**Chart 4 Alberta employment rate, 2011 annual average, men and women, aged 25 to 54**



Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

For core-aged women of Siksika Nation, the employment rate was 47.2%, compared to 62.6% for their First Nation counterparts living off reserve. The employment rate for non-Aboriginal women of core-age was notably higher, at 78.6% (Chart 4).

### 5.3 Youths

Youths aged 15 to 24 are traditionally less likely to be employed than adults 25 or older. One reason for this is that people in this age group are far more likely to be attending school.

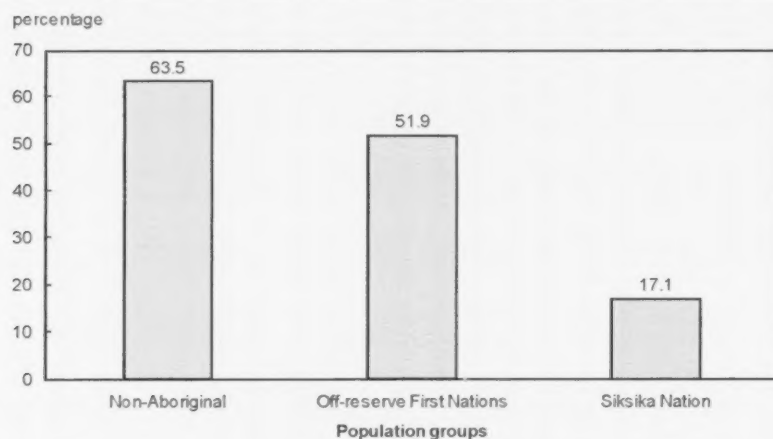
Despite having similar school attendance rates, employment rates for Siksika Nation youths were much lower than they were for both off-reserve First Nations youths and non-Aboriginal youths living in Alberta. In 2011, the employment rate for Siksika Nation youths was 17.1% (the rates were not statistically different by sex), one-third the employment rate of off-reserve First Nations youths (51.9%) and one-quarter the employment rate of non-Aboriginal youths living in Alberta (63.5%) (Chart 5).

### 5.4 People aged 55 and over

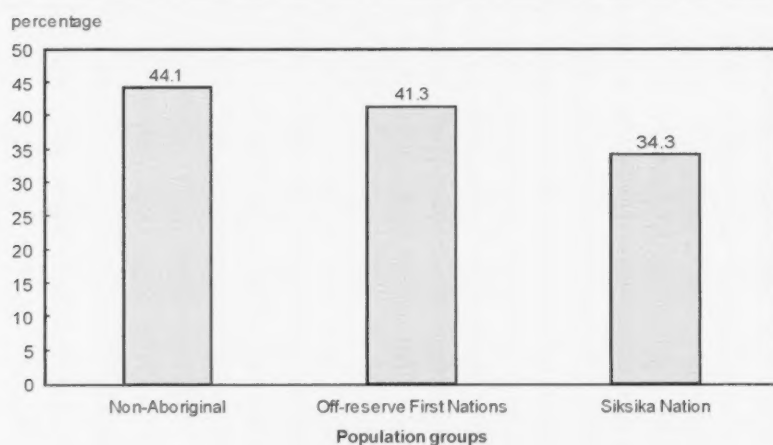
The 55-and-over age group is a diverse group within the labour market. People in this group are more likely to leave the labour force altogether for retirement, while others may continue working or looking for work for financial reasons or out of the desire to continue working.

In 2011, 34.3% of people aged 55 and over living in Siksika Nation were employed. This compared with 41.3% of the First Nations population living off reserve and 44.1% of non-Aboriginal Albertans in the same age group (Chart 6).



**Chart 5 Alberta employment rate, 2011 annual average, youth aged 15 to 24**

Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

**Chart 6 Alberta employment rate, 2011 annual average, population aged 55 and over**

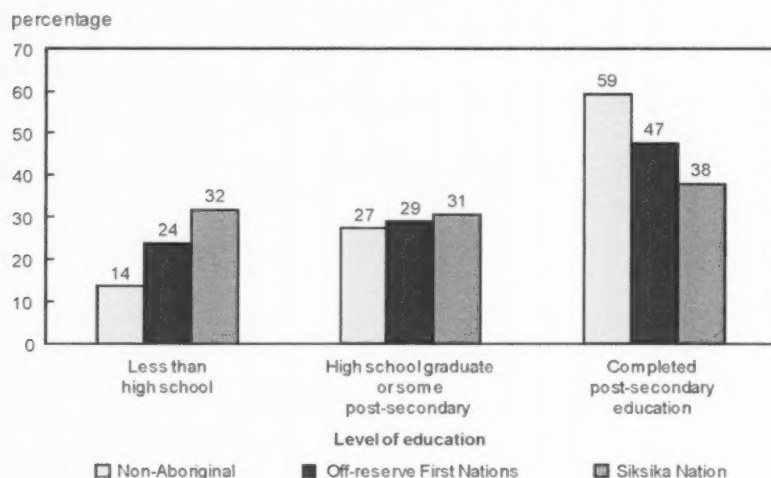
Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

### 5.5 Education

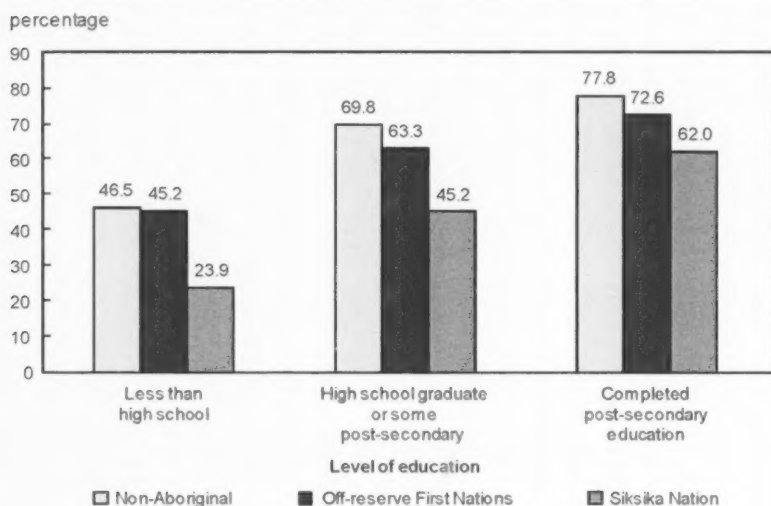
Educational attainment tends to have an impact on labour market outcomes. For this reason, it is important to have a general picture of the educational attainment and school attendance of people in Siksika Nation, as well as those of First Nations people living off reserve and non-Aboriginal people in Alberta before making any direct comparisons of their labour market outcomes. Analysis in this section focuses on people aged 25 and over, since people in this age group are more likely to have completed their education than those aged 15 to 24.

In 2011, more than two-thirds (69%) of people 25 and over living in Siksika Nation had a high school diploma or higher, compared with about three-quarters (76%) of off-reserve First Nations people and 86% of non-Aboriginal people in Alberta (Chart 7). These percentages were very similar to those obtained with the 2011 National Household Survey (NHS). The NHS also indicates that the proportion of people holding at least a high school diploma is larger in Siksika than for "on-reserve First Nations" of Alberta overall, which was 43.6%.

While there can be differences across local labour markets, higher educational attainment is often associated with higher participation and employment rates and lower unemployment rates. The LFS has also shown that employment rates for Aboriginal people (i.e., First Nations people living off reserve, Métis and Inuit) increase greatly with higher levels of educational attainment. The gap in employment rates between Aboriginal and non-Aboriginal peoples is often widest among those with lower levels of education and narrowest among those with post-secondary education.

**Chart 7 Share of Alberta population aged 25 and over by educational attainment, 2011**

Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

**Chart 8 Employment rate by educational attainment, Alberta population aged 25 and over, 2011**

Source: Statistics Canada, Pilot Labour Force Survey in Siksika Nation, 2011.

In 2011, the employment rate for Siksika Nation residents aged 25 and over with less than high school was 23.9% compared with 45.2% for off-reserve First Nations people and 46.5% for non-Aboriginal people in Alberta. Among people aged 25 and over with high school graduation, with or without some post secondary education, the employment rate for Siksika Nation residents was 45.2%, with less of a gap (18 percentage points) with their off-reserve First Nations counterparts compared with those with less than a high school education (21 percentage points).

For people living in Siksika Nation who completed post-secondary education, the employment rate was 62.2%. While this employment rate was still lower than the rate for off-reserve First Nations (72.6%) and non-Aboriginal people (77.8%), the gaps in employment rates between Siksika Nation residents and the other two groups were narrower than they had been for lower levels of educational attainment (Chart 8).

## 6. Summary

This first experience extending the existing Labour Force Survey to a First Nations reserve allowed for the production of many of the main labour market data usually produced by the LFS.

Overall, the response rates in Siksika Nation were quite good and came close to the response rates of other Albertans. There were many challenges, however, in collecting these data in Siksika Nation which had a direct impact on cost and effort required to reach the target response rate, making collection more expensive than originally anticipated. Some of these challenges, however, were not unlike those experienced collecting in any remote area covered by the LFS.

The labour market picture provided by the estimates from the pilot LFS in Siksika Nation reveals a number of differences and similarities compared with First Nations people living off reserve and non-Aboriginal people in Alberta in 2011.

The participation rate for those aged 15 and over living in Siksika Nation, at 51.0%, was lower than it was for off-reserve First Nations people in Alberta whose rate was 67.7%. At the same time, the employment rate in Siksika Nation was also lower at 37.5% compared with 60.2% for off-reserve First Nations people and 70.0% for non-Aboriginal people. As one might expect with lower participation and employment rates, the unemployment rate on Siksika Nation was higher than the rate for off-reserve First Nations people (26.5% vs. 11.1%, respectively).

For core-aged workers, the employment rate for Siksika Nation men was substantially lower than for off-reserve First Nations men and non-Aboriginal men. The same was true in 2011 for core-aged women living in Siksika Nation.

Fewer than one in five Siksika Nation youths were employed, compared to about half of off-reserve First Nations youths and more than three out of five non-Aboriginal youths in Alberta.

Among older workers in Siksika Nation – people aged 55 and over – the employment rate at 34.3% was closer to that for off-reserve First Nations people (41.3%), and for non-Aboriginal Albertans (44.1%) than for the other major demographic groups.

The gap in employment rates between Siksika Nation, off-reserve First Nations, and non-Aboriginal people in Alberta generally narrowed with higher levels of educational attainment. People in Siksika Nation with less than high school had an employment rate gap of 20 percentage points compared with off-reserve First Nations people, which narrowed to 10 percentage points among those with a post-secondary education. Compared with non-Aboriginal Albertans, the gap narrowed from 22 percentage points among those with less than high school education to 16 percentage points with a post-secondary education.

Despite some collection challenges, the pilot LFS in Siksika Nation was a success, as it allowed for the production of a series of estimates that provide an employment picture for residents of Siksika Nation. However, a number of issues would have to be examined before a process could be implemented in a regular collection effort. ■